

REMARKS**I. INTRODUCTION**

Claims 10-12, 18-20 and 26 have been amended above to clarify the exemplary embodiments of the present invention as recited therein. Claims 10-12 and 15-26 are now under consideration in the above-referenced application. Provided above, please find a claim listing indicating the current amendment to claims 10-12, 18-20 and 26.

Applicants respectfully assert that the amendments to claims 10-12, 18-20 and 26 fully comply with the requirements set forth in 37 C.F.R. § 1.121. Support for the claim amendments can be found in, e.g., the specification and originally-filed claims. (See, e.g., Substitute Specification, paras. [0012], [0030]-[0032] and [0042]). It is respectfully submitted that no new matter has been added.

II. REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH IS MOOT

Claim 26 stands rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the written description requirement and being non-enabling. Specifically, the Examiner alleges that there is no antecedent support in the Specification for the recitation of an intermetallic compound that is limited to be in a position abutting on an Al phase, and that the specification does not teach how to form a plating layer with an aluminum intermetallic compound limited to abutting an Al phase. (See Office Action, dated March 21, 2006 paras. 5 and 6).

Although Applicants respectfully disagree with this rejection, claim 26 has been amended herein above to remove the recitation of an intermetallic compound that is limited to be in a position abutting on an Al phase. Thus, the rejection under 35 U.S.C. § 112, first paragraph, is now moot, and should therefore be withdrawn.

III. REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH SHOULD BE WITHDRAWN

Claims 10-12 and 15-26 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. The Examiner alleges that it is unclear as to what is meant by the phrase “-type intermetallic compound” and by the phrase “Al phase.” (See Office Action dated March 21, 2006, paras. 10 and 11). Applicants respectfully disagree and traverse this rejection.

A. Phrase “-type intermetallic compound”

Applicants respectfully assert that the phrase “-type intermetallic compound” provided, in e.g., the specification of the above-identified application is understood by those of ordinary skill in the art. For example, the phrase “X-type intermetallic compound” is provided in the specification of the above-identified application to describe an intermetallic compound that contains X, and the phrase “X-Y-type intermetallic compound” is provided to describe an intermetallic compound that contains both X and Y. Further, a phrase -- X-Y-type intermetallic compound -- may also contain other elements in addition to X and Y. However, such description in no way limits the claims and should not be used to interpret the claims.

Examples of such references to the phrase “-type intermetallic compound” can be found, *inter alia*, in the Substitute Specification at paragraph [0013]. The last line of this paragraph provides: “The Ti-Al-type intermetallic compound may be $Ti(Al_{1-x}Si_x)_3$.” This exemplary description indicates, e.g., that the phrase “X-Y-type intermetallic compound” can refer to an intermetallic compound that contains X and Y. Accordingly, it is respectfully asserted that the phrase “-type intermetallic compound” is abundantly clear to those of ordinary skill in the art.

Applicants therefore respectfully request that this rejection of claims 10, 15, 17, 18, 23 and 25 under 35 U.S.C. § 112, second paragraph be withdrawn.

B. Phrase “Al phase”

Applicants assert that the phrase “Al phase” is understood by those of ordinary skill in the art. For example, in the specification of the above-identified application describes that an Al phase can represent the identifiable microscopic feature at ordinary temperature that results from the cooling of a high-temperature Al solid-solution “primary crystal,” even though the components of the high-temperature crystal may separate into multiple finely-divided phases upon cooling. (See, e.g., Substitute Specification, paras. [0023] and [0024]). This description is clear to one of ordinary skill in the art upon reading the specification. However, such description in no way limits the claims and should not be used to interpret the claims.

Such exemplary statements regarding an Al phase may be related to the observation that a true single-phase solid solution (e.g., an “Al primary crystal”) that may be present at high temperatures can separate into, e.g., a fine Al phase and a fine Zn phase (in an exemplary Al-Zn solid solution) as the plating material is cooled. (See, e.g., Substitute Specification, para. [0023]). Thus, an Al phase may contain finely-separated true phases of Al and of other component elements (e.g., Zn) at ordinary temperatures, and it may not be a true single “phase.” However, an Al phase, e.g., “derives from such an Al phase (called an Al primary crystal) at high temperature” and “retains the shape derived from an Al primary crystal [at high-temperature].” (See, e.g., Substitute Specification, paras. [0023] and [0024]).

Further, the Al-Zn example described in para. [0023] of the Substitute Specification merely serves as an example to illustrate the above description of an Al phase for an exemplary embodiment of an Al-Zn binary system, and does not limit the definition of an Al phase to include only Al-Zn compounds. Accordingly, it is asserted that the phrase “Al phase” is abundantly clear to those of ordinary skill in the art.

Applicants therefore respectfully request that this rejection of claims 10 and 18 under 35 U.S.C. § 112, second paragraph be withdrawn.

IV. REJECTION UNDER 35 U.S.C. § 103 SHOULD BE WITHDRAWN

Claims 10, 15, 16 and 17 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over PCT Publication No. WO 01/27343 by Friedersdorf et al. ("Friedersdorf").

In the Office Action dated March 21, 2006, the Examiner acknowledges that claims 11 and 12 contain allowable subject matter. (See Office Action, para. 16). Accordingly, independent claim 10 has been amended to include a recitation of claims 11 and 12 that the plating layer contains Mg of about 1% to 10% in mass. Independent claim 18 was also amended above to recite such subject matter, since the Examiner also confirmed that claims 19 and 20 (that include such recitations) are also allowable. (See Office Action, para. 16). Further, claims 11 and 12 which depend from claim 10, and claims 19 and 20 which depend from claim 18, have been amended to exclude such recitation.

Indeed, it is respectfully asserted that Friedersdorf does not teach, suggest or disclose the use of Mg in the composition range of about 1% to 10% in mass in the plated material, as recited in amended independent claims 10 and 18.

Further, claims 11, 12, 15, 16 and 17 each depend from claim 10 or claim 18, directly or indirectly. Therefore, Applicants respectfully assert that these claims are allowable over Friedersdorf for at least the same reasons, and also contain separately allowable subject matter.

For at least the above reasons, Applicants respectfully assert that Friedersdorf fails to teach, suggest or disclose the subject matter recited in amended independent claims 10 and 18 and the claims which depend therefrom. Therefore, Applicants respectfully assert that the rejection of claims 10, 15, 16 and 17 under 35 U.S.C. § 103 should be withdrawn, and

respectfully request that a confirmation be provided that all pending claims 10-12 and 15-26 are allowable.

V. CONCLUSION

In view of the above, it is respectfully submitted that pending claims 10-12 and 15-26 are in condition for allowance. Prompt consideration, reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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Gary Abelev
Patent Office Reg. No. 40,479

Steven P. Marsh
Patent Office Reg. No. 53,271

DORSEY & WHITNEY, L.L.P.
250 Park Avenue
New York, New York 10177

Attorneys for Applicants
(212) 415-9371